

## PATENT

App. Ser. No.: 10/600,382  
Atty. Dkt. No. ROC920030127US1  
PS Ref. No.: IBMK30127

**IN THE CLAIMS:**

Please amend the claims as follows:

1. (Currently Amended) A computer implemented method comprising:  
creating ~~a reference~~ an annotation corresponding to a first data object identified by a first plurality of identifying parameters that identify a location of the first data object;  
creating an index for the first data object, the index comprising one or more index values, each generated based on one or more of the first plurality of identifying parameters that identify a location of the first data object; ~~[[and]]~~  
creating a record ~~containing the reference~~ containing the annotation corresponding to the first data object and the index for the first data object; and  
storing the record and the index for the first data object in a storage medium.
2. (Canceled)
3. (Original) The method of claim 1, where a number of the index values is greater than a number of the first plurality of identifying parameters.
4. (Original) The method of claim 1, wherein creating the index for the first data object comprises:  
classifying the first data object based on the first plurality of identifying parameters;  
selecting a first mapping, from a plurality of mappings, based on the classification of the first data object; and  
converting the first plurality of identifying parameters to one or more of the index values, as specified in the first mapping.
5. (Currently Amended) The method of claim 4, further comprising:  
creating ~~a reference~~ an annotation corresponding to a second data object identified by a second plurality of identifying parameters;  
classifying the second data object based on the second plurality of identifying parameters;

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selecting a second mapping, from the plurality of mappings, based on the classification of the second data object;

creating an index for the second data object by converting the second plurality of identifying parameters to one or more index values, as specified in the second mapping; and

creating a record containing the reference annotation corresponding to the second data object and the index for the second data object.

6. (Original) The method of claim 5, wherein the first and second data objects are of different types.

7. (Original) The method of claim 5, wherein the first and second sets of identifying parameters comprise different numbers of parameters.

8. (Original) The method of claim 5, wherein the first object is a sub-object of the second object and the second set of identifying parameters is a subset of the first plurality of identifying parameters.

9. (Original) The method of claim 5, wherein:

the first data object is contained in a text document, wherein the first plurality of identifying parameters includes at least one or more parameters indicating a location and name of the text document; and

the second data object is contained in a database table, wherein the second plurality of identifying parameters includes at least one or more parameters indicating a location and name of the database table.

10. (Currently Amended) A computer implemented method of managing annotations for a plurality of different type data objects, comprising:

receiving a set of parameters identifying an annotated data object, wherein the identifying parameters identify locations of the annotated data object;

selecting, based on the set of identifying parameters, a mapping from a plurality of mappings, each containing a different set of mapping functions; and

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creating an index for the annotated data object by mapping the identifying parameters to columns in an index table, as specified by the mapping functions of the selected mapping.

11. (Original) The method of claim 10, wherein the mapping functions for each mapping are designed to map a different set of identifying parameters to columns in the index table.

12. (Original) The method of claim 11, wherein the mapping functions of at least one of the mappings maps more than one identifying parameter to a single column.

13. (Original) The method of claim 12, wherein the more than one identifying parameters are mapped to different sets of bytes in the single column.

14. (Currently Amended) The method of claim 10, wherein:  
at least one of the mappings comprises mapping functions for mapping parameters identifying annotated data objects associated with a database to the index table columns; and

at least one of the mappings comprises mapping functions for mapping parameters identifying annotated data objects associated with a text document to the index table columns.

15. (Currently Amended) A computer-readable storage medium containing a program which, when executed by a processor, performs operations comprising:

creating an annotation for a data object identified by a plurality of identifying parameters, wherein the identifying parameters identify a location of the data object being annotated;

creating an index for the data object, the index comprising one or more index values, each generated based on one or more of the plurality of identifying parameters;  
and

creating an annotation record containing the annotation and the index for the data object.

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16. (Original) The computer-readable medium of claim 15, wherein creating the index for the data object comprises:

selecting, based on the plurality of identifying parameters, a mapping from a plurality of mappings each containing a different set of mapping functions; and

mapping the plurality of identifying parameters to columns of an index table containing the index, according to the mapping functions of the selected mapping.

17. (Original) The computer-readable medium of claim 16, wherein the mapping functions for each mapping are designed to map a different set of identifying parameters to columns in the index table.

18. (Original) The computer-readable medium of claim 16, wherein the mapping functions of at least one of the mappings maps more than one identifying parameters to a single column.

19. (Original) The computer-readable medium of claim 18, wherein the more than one identifying parameters are mapped to different sets of bytes in the single column.

20. (Currently Amended) A system for managing annotations for different type data objects, comprising:

a processor;

a storage medium containing an annotation database for storing annotation records containing annotations for the different type data objects;

an index table for storing indexes for the different type data objects, the index table having a plurality of columns, each corresponding to a different value of the indexes;

a plurality of mappings, each containing functions for mapping a set of identifying parameters for a different type of data object to one or more columns in the index table; and

an ~~executable~~ annotation component executable by the processor and configured to receive sets of parameters identifying data objects and, for each set of identifying parameters received, select one of the mappings based on the

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corresponding set of identifying parameters, and create an index for the first data object by mapping the first set of identifying parameters to columns in the index table, as specified by the mapping functions of the selected mapping.

21. (Original) The system of claim 20, wherein at least one of the mappings comprises mapping functions for mapping parameters identifying data objects associated with a database to the index table columns.

22. (Original) The system of claim 20, wherein at least one of the mappings comprises mapping functions for mapping parameters identifying data objects associated with a text document to the index table columns.

23. (Original) The system of claim 20, wherein the annotation component is further configured to:

- receive a request for an indication of annotated data objects contained within a document identified by a set of parameters;

- select one of the mappings based on the set of parameters identifying the document;

- create an index for the document by mapping the set of parameters identifying the document to columns in the index table as specified by the mapping functions of the selected mapping;

- search the index table for indexes matching the index created for the document;

- convert each index matching the index created for the document, if any, to a set of parameters identifying a corresponding annotated data object; and

- return each set of parameters identifying a corresponding data object.

24. (Original) The system of claim 20, wherein the annotation component is further configured to:

- receive a request for an indication of annotations associated with a specified data object identified by a set of parameters;

- select one of the mappings based on the set of parameters identifying the specified data object;

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create an index for the specified data object by mapping the set of parameters identifying the specified data object to columns in the index table as specified by the mapping functions of the selected mapping;

retrieve annotations, if any, for the specified data object, based on the index for the specified data object; and

return the annotations.

25. (Original) The system of claim 24, wherein retrieving annotations for the specified object comprises:

determining if any indexes in the index table match the index created for the specified data object; and

if so, retrieving one or more annotations for the specified data object from the annotation database.

26. (Original) The system of claim 24, wherein the annotation component is configured to retrieve annotations for sub-objects of the specified data object.

27. (Original) The system of claim 20, wherein the annotation component is further configured to:

receive a request for data objects having annotations satisfying one or more specified conditions;

search the annotation database for annotations satisfying the one or more specified conditions;

obtain indexes for data objects associated with annotations, if any, satisfying the one or more specified conditions;

convert each of the indexes obtained to a set of parameters identifying the associated data object; and

return the annotations satisfying the one or more specified conditions and the sets of parameters identifying the associated data objects.